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ABSTRACT

The grading patterns of teachers at Georgia State University were examined to ascertain the relationship between course discipline fields and grading patterns controlling for teachers' academic and personal attributes. The data base consisted of over 2,000 courses comprising more than 40,000 grades and 1,000 teachers from fall 1975. A methodology is introduced to both normalize and stabilize course grade measures. The findings indicate that the academic field of the course is strongly related to the letter grade assigned. Courses emphasizing quantitative and factual learning tend to record lower grades. The higher grades are found in certain career-oriented courses, such a teacher training. There is a tendency in undergraduate courses that as class size increases, the proportion of higher grades decreases. Courses with a higher grading pattern have fewer withdrawals. The academic credentials and personal characteristics of the teachers are only modestly related to grades given. Temporary teachers have higher grades in their courses, but characteristics such as sex, marital, and minority status are not systematically related to grades given. (Author/LBH)

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FACULTY GRADING PATTERNS

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APRIL, 1976

OFFICE OF INSTITUTIONAL PLANNING

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THIS REPORT IS THE FIRST IN A SERIES ON GRADES AT GEORGIA STATE UNIVERSITY

FACULTY GRADING PATTERNS

Report No. 76-12

by

James E. Prather and Glynton Smith

Technical Computer Support
by
John E. Williams

OFFICE OF INSTITUTIONAL PLANNING
April, 1976

ABSTRACT

A study has been conducted on grading patterns of faculty at Georgia State University. It examined the characteristics of faculty members in relation to grades in the more than two thousand courses for Fall, 1975. The technique of multiple regression was employed to take into account the large number of faculty variables investigated. Separate analyses were performed by graduate and undergraduate levels and then by letter grade.

The study was undertaken at the request of several of the chairmen of university-wide Self-Study committees. It was the aim of this study to provide insight into faculty grading patterns and provide additional information that will aid decision-making concerning grading standards.

Some of the highlights are:

* Part-time teachers, GTA's and instructors give higher grades on average than other members of the faculty at the undergraduate level. This relationship did not remain at the graduate level except for part-time teachers.

* Courses showing a tendency to have proportionately higher grades at the undergraduate level include: special education; curriculum and instruction; health, physical education, recreation, and safety; and early childhood. At the graduate level courses showing this pattern include: curriculum and instruction; counseling and psychological services; and special education.

* Courses showing a tendency to have proportionately lower grades at the undergraduate level include: developmental studies; accounting; music; vocational and career development; chemistry; decision mathematics; and information systems. At the graduate level they include: psychology; urban life; and accounting.

* There appears to be a progression to more stringent grades for undergraduate courses as the faculty member's rank increases. Correspondingly, department head status is indicative of the most stringent grading pattern. This relationship did not appear at the graduate level; however, department head status remained as a negative impact on grades.

* Courses with a higher grading pattern have fewer withdrawals.

* As the size of the class increases, the proportion of higher grades tends to decrease.

* There is a negative relationship between years at the institution and grades indicating that the longer a faculty member has been at the institution the less likely that he or she gives higher grades.

* As the age of the faculty increases, the probability of higher grades also increases.

ACKNOWLEDGMENTS

This report encompasses the first phase of a major project studying grades at Georgia State University. We wish to take this opportunity to acknowledge the assistance and contributions of a number of individuals who have participated in the project. The following served on an ad hoc advisory committee and gave input and advice:

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INTRODUCTION

> Some professors in some institutions have greatly reduced their expectations of students, have abandoned all differential grading, have renounced any standards in the name of meeting the standards of the individual student. We greatly regret this. There should be no erosion of intellectual standards. (Carnegie Commission, 1973, p. 30)

Grading standards are a subject of serious debate throughout higher education. In the University System of Georgia, a trend of changing grading patterns has been recognized. New components of assessing student performance have been added in the form of competency and exit examinations. The policy on student withdrawal from a course has also been reviewed and changed in light of the effect on measuring student academic performance.

The nature and philosophy about the value of grades in higher education is thought to have changed. Several explanations have been offered by Bolin (1975): 1) recent students may be more intelligent and better academically prepared; 2) degree program requirements have changed considerably in the last decade or so; 3) pass-fail and similar grading schemes have been introduced; and 4) the standards of scholarly achievements have been lower in recent years.

It has been argued by Etzioni (1975) that the two prevalent views of grading standards--the traditional and the progressive--are inconsistent with recent increases in grade point averages (GPA) which has been widely labeled grade inflation. According to Etzioni the traditionalists maintain that when a student works for a better grade he is receiving valuable training for real life situations where competition and ranking are

constantly present. Grades are said to advise the students of their achievement in academic pursuits, and this provides an incentive to excel. On the other hand, the progressive viewpoint is that learning is its own reward and that grades are demeaning. The reinforcement purpose of grades interferes with the true need of the student. This need is feedback, which is ongoing, rather than a final letter grade. Etzioni concluded that:

> Whichever philosophy one subscribes to, neither provides a rationale for the kind of wishy-washy grading now on the increase. It has all the disadvantages of a grade hierarchy with few of its benefits. It does rank and label people, but does not give them clear performance cues. . .
>
> What is needed is open discussion leading to departmental or faculty-wide resolutions endorsing either a relatively standardized system of meaningful grades or the abolition of all grades--eliminating grade inflation one way or the other. (p. 101)

The precise degree of grade inflation throughout higher education is not known because few studies have been offered on grading patterns. The type of information most frequently offered is that which notes the increasing proportionate frequency of A grades being given and students graduating with honors. This type of ad hoc analysis for Georgia State University is shown for the last decade with the various letter grades being plotted using percentages of each grade given for the Fall Quarter. The graphs are shown in Figures 1 and 2.

Figure 1 is the graph of all undergraduate grades which shows the following trends:

* The grade of A increased from about 10% in Fall, 1968, to around 25% by Fall, 1973.

* The C grade dropped from over 35% in 1965 to below 25% by 1972, with the B grade remaining at about 30% over the years.

FIGURE 1

Graph of Percentages of Undergraduate Letter Grades: Fall Quarter 1965 - 75

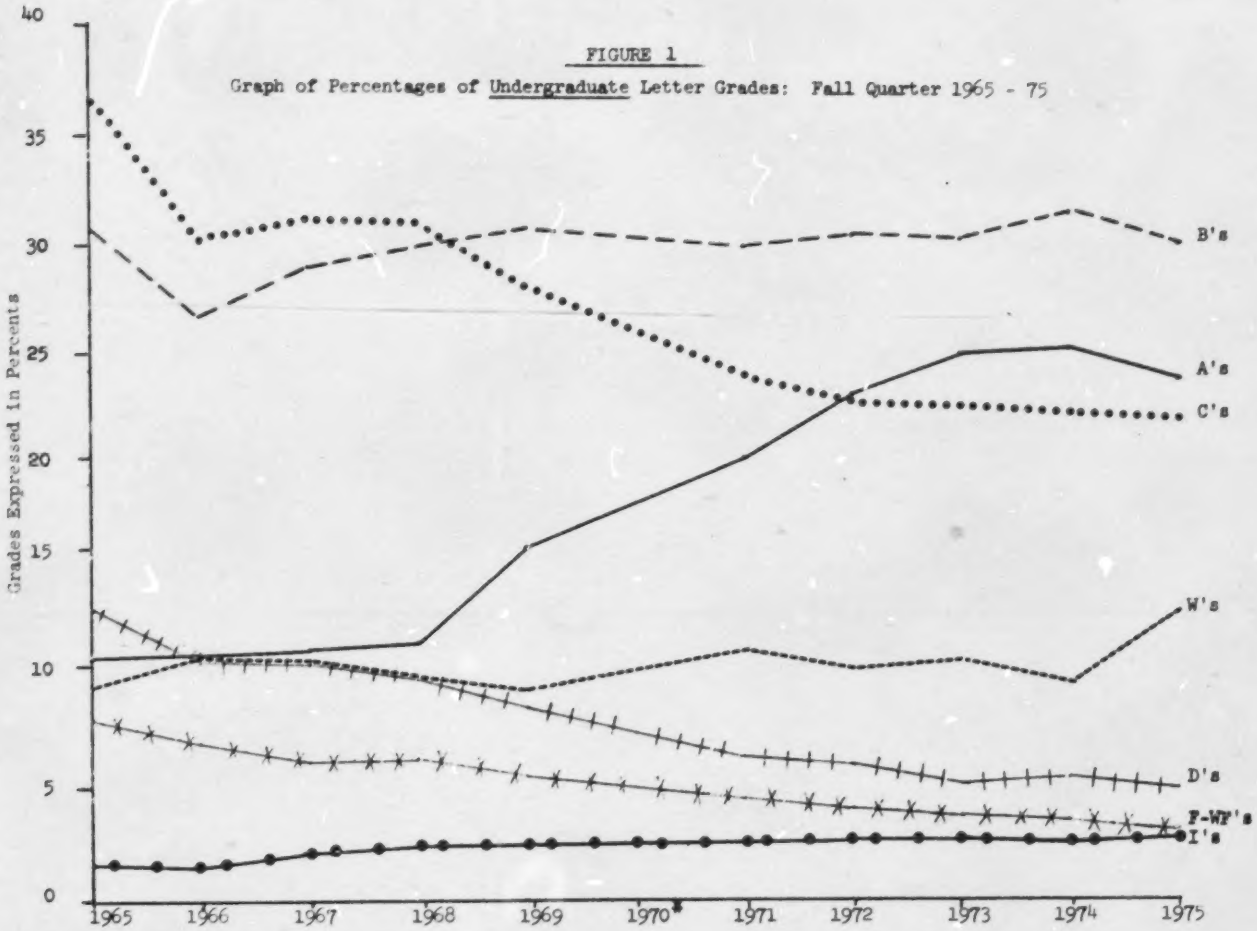
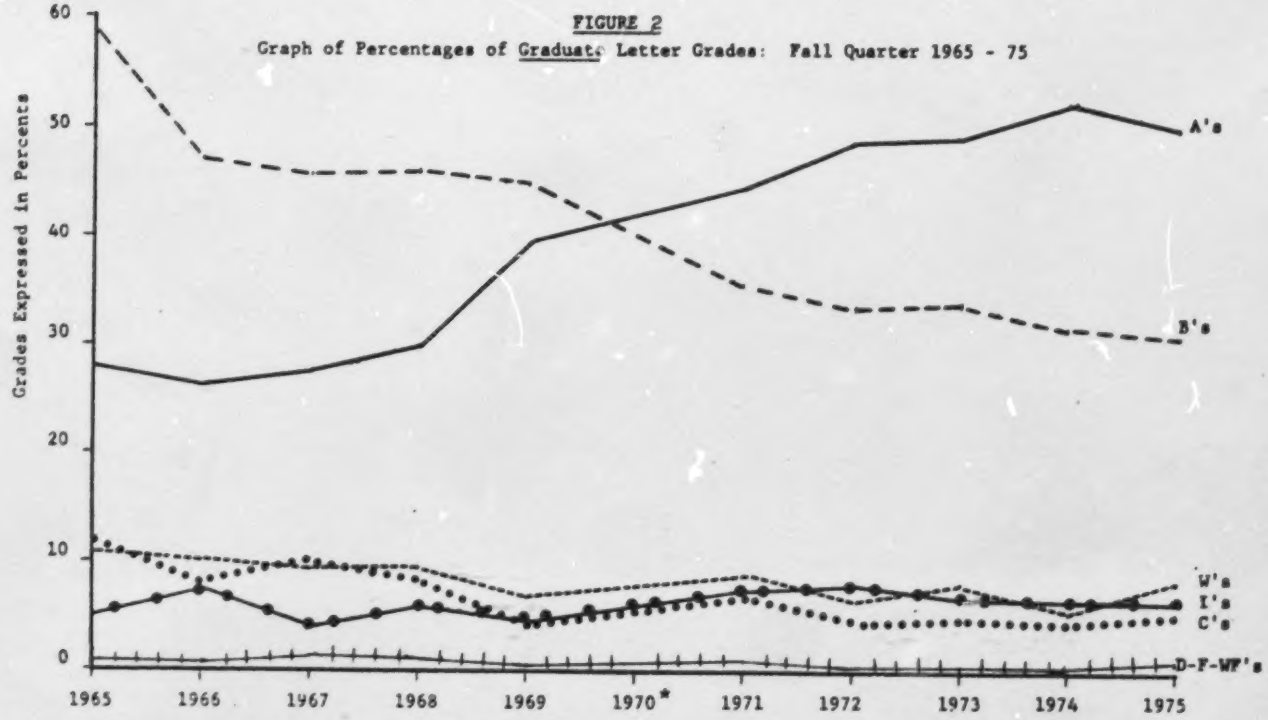


FIGURE 2

Graph of Percentages of Graduate Letter Grades: Fall Quarter 1965 - 75



*1970 data excluded due to inconsistencies

* The percentage of D and F grades decreased by about one-half during this period.

The percentages of graduate letter grades are given in Figure 2. The graph reflects the following trends:

* The A grades increased from below 30% in Fall, 1968, to over 50% in Fall, 1974.

* The grade of B dropped in percentages from almost 60% to about 30%, and the proportion of C grades decreased by one-half.

This type of evidence is complemented by the effort of Zigli (1972) which reviews the distribution of letter grades at Georgia State University with the conclusion that there:

> appeared to be definite patterns in grading at Georgia State University. It was revealed that Georgia State University, as a whole, appeared to be increasing the percentage of A's given over the time period in this study [which was Fall Quarter, 1968, to Spring Quarter, 1971]. At the same time, the percentage of C's appeared to be decreasing. (p. 4)

While the import of Figures 1 and 2 may seem substantial, this is still ad hoc evidence that cannot be used to determine if the cause is a change in student ability levels, degree program requirements, or lowering of standards for scholarly achievement. The evidence to answer the question of what is the cause would require controls for student ability, program of study, and faculty grading standards.

PURPOSE

This research effort aims to provide insight into faculty grading practices at Georgia State University and provide additional information and data that will aid decision-making concerning the question of grading standards. It will attempt to answer two basic questions:

1. What are the relationships between the characteristics of individual teachers and grades given?

2. What are the course patterns in grades?

The study was undertaken at the request of several of the university-wide self-study committees.

LIMITATIONS

1. The research effort will not attempt to provide information on what grading standards ought to be. Rather, it will attempt to describe what is happening in grading at Georgia State University.

2. The study is limited to one point in time: Fall Quarter, 1975.

3. Student ability levels and student performance in major programs will be addressed in a subsequent study along with the longitudinal pattern of grades.

4. Faculty attitudes, and perhaps student attitudes, will also be the subject of a future study. With the time constraints of this report, it was not considered feasible to incorporate a questionnaire into the project.

REVIEW OF RELATED LITERATURE

A study by McDonald (1966) investigated the effects of the transition of Georgia State University from "open door" to "selective" admissions. His research was concerned, in part, with grading patterns of individual instructors as well as variance between departments. McDonald reported that:

> The grading system for the traditional introductory college courses is not congruent with the formally defined systems described in the college's official catalogue. There is significant variance in grading within and between departments teaching traditional freshmen courses. The rationale for grades also varies within and between departments because grades are a function of subject content and faculty preference rather than logically developed and objectively defensible criteria. (p. 143)

Another very interesting finding by McDonald was that while Georgia State University drastically improved the academic quality of its students as measured by high school GPA and SAT scores through selective admissions, the freshmen teaching faculty did not shift their grading pattern. "In 1961 the best freshmen class in the history of Georgia State College found it more difficult to make a C or better than previous classes with lesser qualification" (p. 62). Thus this study indicates that one aspect of selective admissions was a deflation in grading by the faculty.

McDonald conducted a survey as a part of his research to obtain faculty perceptions and opinions of grading in freshmen courses. The official marking system described in the catalogue was the A-B-C-D-F system representing achievement described as Excellent, Good, Average, Poor, and Failure, respectively. This type of grading is known as a "relative" marking system in which the letter grade describes the level of achievement relative to the performance of peers from the same college community. Another marking system is the "absolute" and prescribes to a definite percent of perfection of content, achievement, or mastery. The faculty survey indicated that eighty-four percent described their individual grading system to be "absolute" representing drastic inconsistencies with the official policy statement regarding the grading system.

An analysis of grades by Safarik (1974) in California pointed up the inconsistencies between grades assigned and the grading system described in the college bulletin. Since the grade of C is defined as average work and the grade analyses showed that the average grade is B at that institution, then the "average" is "above the average." Safarik stated that:

> The problem originates in part, in the structure of grades as a single score or entity which thus logically communicates information regarding only one dimension. But a faculty's awarding of grades often seems to consider many criteria such as academic achievement, effort, interest, and participation. Additionally, the importance placed on each of the multiple criteria considered may vary both within and across department curricula. Given a heterogeneity of criteria and of opinions as to their importance, it seems likely that a faculty consensus on the meaning of a grade may be difficult to attain. (p. 29)

The work of Williams (1971) investigated the relationship between characteristics and perceptions of instructors with grading practices at a junior college. He found little overall difference in the grading pattern of male and female faculty; however, faculty in the age range of 35 to 55 years of age tended to be the highest graders. Instructors in business administration and commerce; languages and arts; science and mathematics; and social science areas showed a higher probability of being low graders. Individuals teaching fine arts; physical education and recreation; health, vocational and special programs showed a greater likelihood of being high graders.

The positive functions of grades are addressed by Feldmesser (1972). He refuted the common criticisms of conventional grades and made a case for the benefits to the student of "a grade, the GPA, and the reported

and recorded appraisals that becomes a student's permanent record" (p. 66). Feldmesser believes that lack of validity is the most legitimate criticism of grades and that the main reason is that the overwhelming majority of college faculty has not been trained to make valid educational evaluations. He restated his belief by quoting what McGeorge Bundy (cited in Feldmesser, 1972) said some years ago:

> The ordinary college teacher, giving out grades in the ordinary way on the basis of a few special papers or tests and a single final examination, is a fountain of error, and everyone knows it except the man himself. (p. 72)

Student evaluations of faculty have received more attention in this era of accountability. Some believe that teachers may be tempted to use easy grading as a means of buying high student evaluations. Hills (1974) provided an excellent review on the uses of student ratings of faculty. With regard to grades and evaluations, he reported:

> There is not even a consistent relationship between the grades students get and the ratings they give the faculty. The relationship has been found to be positive, zero, and negative in various studies. One might have thought that at least the students would return the compliment of a good grade with a good rating, but often the ratings are obtained before the grades are received. (p. 320)

Goldman and Hewitt (1975) suggested that the "antecedents and consequences of college grading are inextricably tied together by a personal characteristic of college instructors" (p. 149). The characteristic to which they referred is adaptation-level and concerns the concept that grading practices are partly determined by the ability level of the student population. Their research seems to support the adaptation-level explanation of grading practices at the low and middle ability levels. In other words, the fields with the lowest ability students

award the highest grades for a given ability level. Goldman et al., (1974) reported the adaptation-level theory does not hold true for the high ability student because "the high ability students can probably perform well in all or most major fields" (p. 356).

The literature gives an indication of the complexity of grades. To establish that grading patterns have changed in higher education is possible by a simplistic analysis. However, to investigate the interaction of factors causing this redistribution is complex by its own unique nature.

PLAN OF THE STUDY

The orientation of the study is basically descriptive. It is concerned with the relationship between instructor characteristics and grades given. The primary data base is from course by course grades for each class of Fall Quarter, 1975, provided by the Registrar's Office. Faculty attributes were extracted from the Personnel Services data base. The data components allow grading practices to be studied by the categories of level of instruction and course designations while controlling for the academic and personal attributes of the faculty. The characteristics of the faculty consist of sex, race, age, rank/title, highest degree earned, years employed, budgeted department, tenure, and other variables thought to be relevant. The analysis focuses on the distribution of grades for each of the several thousand courses taught Fall Quarter, 1975. Separate analyses are performed by graduate and undergraduate levels.

THE ANALYSIS

The research design is based upon a general approach to model formulation. The chosen approach is a general linear mathematical model (i.e., regression analysis) which is a direct and powerful way of effective formulation and solution to a diversity of research questions. The use of a general model allows maximum flexibility, while retaining the strength and robustness of ordinary least squares (OLS). It is contended that to analyze the grade data using analysis of variance or analysis of covariance alone, or discretely, would present problems of interpreting the given analysis.

The least squares analysis of grades was performed using a step-wise procedure which is a mathematical algorithm that ranks the regressors according to how much of the variance in the regressand is accounted for, controlling for the other variables previously entered into the analysis. The purpose of using this technique was to aid in locating those variables which had the strongest empirical association with the regressand. To aid in interpreting the regression analysis, the regression coefficient is given along with its standard error of estimate (SEE). The standardized regression coefficient--β--is included so that relative impact of that regressor can be readily seen. It should be noted that this type of analysis appears to be brute-force empiricism and it is with the choice of the "best" regression intended to be an enlightening one. One investigator expressed the thought in this fashion, "Of course, we would trade all those searches for one good idea. And that idea might come from looking at the data" (Tufte, 1974, p. 163).

The form in which the key variables are expressed may seem to be unorthodox in light of traditional educational research. Nevertheless,

it can be shown that there is a need for grade data to be transformed because it is typically non-normal with unstable variances (Safarik, 1974, pp. 6-7). To both stabilize and normalize the grade data in this study, the variables which are expressed as counts--number of A's, age, years employed, salary, and the like--have been expressed in logarithms. The virtues of the logarithmic transformation are that it aids in stabilizing and normalizing badly skewed distributions, provides a more useful theoretical interpretation, and more closely meets the assumptions of OLS. The logarithmic model assumes that a proportionate relationship exists between the regressors and the regressand. The coefficients that one obtains from the logarithm model can be easily interpreted as percentages--elasticities to the econometrician--where the regression estimators measure the percentage change in the regressand associated with a percentage change in a regressor.

It should be noted that the grades of WF, S, and U have not been presented although these grades are a part of the official grading system. The grades of WF and U are so infrequently assigned that to analyze them would have been merely an exercise. Appendix A provides a summary of grades given Fall Quarter, 1975.

Undergraduate Grades

The analysis of undergraduate courses is presented in Tables 1 through 8. The analysis in Table 1 uses the total grades weighted on the four point (A=4; B=3; C=2; D=1) system for the undergraduate courses taught Fall Quarter, 1975. The multiple correlation squared (R^2) was .82. This regressand and those for the other tables are transformed into logarithms. The regression estimators may be interpreted as percentages, for example, the coefficient of -.16 for the freshman course variable can be said to mean that freshman

courses would be expected to have weighted grades that are sixteen percent lower than the reference courses. Those variables having estimators that are at least twice their respective standard errors were considered to be worthy of special note in the following summaries of each table. This is not to say that other variables not fitting this arbitrary criteria should be ignored or discounted, but is simply meant as an aid in presentation.

Developmental Studies (DS) courses have been included even though these are remedial courses not included in the student's GPA. It was thought to be of interest as to how these courses are graded in comparison to regular courses. The method of analysis controls for DS courses and their inclusion does not effect the results for the regular courses.

The table may be summarized as follows:

* The pattern of total weighted grades indicates that as class size increases, the total weighted grades increase at a slower rate. This pattern was found by Safarik (1974) at California State University, Chico.

* Courses in developmental studies have substantially lower grades.

* Freshman and sophomore courses have comparatively lower grades.

* Part-time teachers, instructors and graduate teaching assistants (GTA's) give higher grades on average.

* The courses having the higher relative grading pattern are curriculum and instruction; special education; early childhood education; and health, physical education, recreation and safety.

* The courses with the lower weighted grades are developmental studies; accounting; music; math; vocational and career development; information systems; chemistry; and decision mathematics.

TABLE 1
Regressand: Total Weighted Grades (Log)
By Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.89	.01	.90
DS	-.78	.08	-.14
Freshman Course	-.16	.04	-.07
AC	-.33	.07	-.06
ECI	.35	.09	.05
MUS	-.26	.06	-.05
Dept Head	-.15	.09	-.03
MATH	-.25	.07	-.04
VCD	-.44	.14	-.04
Female	.05	.03	.02
SPE	.47	.12	.06
Ed.D. Degree	-.26	.09	-.05
DEC	.32	.12	.03
IS	-.28	.10	-.04
HPRS	.15	.09	.02
Full Prof	-.01	.08	-.01
Sophomore Course	-.08	.04	-.03
Part-Time Inst	.34	.08	.12
A&S Dean's Office	-.16	.06	-.05
Tenured	.12	.06	.06
HIST	-.17	.06	-.04
BIO	-.15	.06	-.03
CHEM	-.19	.08	-.03
DM	-.16	.07	-.03
Instructor	.27	.08	.08
BED	-.16	.10	-.02
Age	.16	.07	.04
G.T.A.	.22	.08	.06
Asst Prof	.17	.07	.08
MH	.12	.09	.02
Assoc Prof	.10	.07	.04
M.A. Degree	-.03	.05	-.01
Single	.03	.03	.01
FI	-.10	.11	-.01
ENG	-.06	.05	-.02
PHYS	-.11	.10	-.01
M.B.A. Degree	-.02	.08	-.01
MGT	.05	.07	.01
FED	.06	.10	.01
Junior Course	.03	.03	.01
POLS	.04	.08	.01
UL	.11	.14	.01
D.B.A. Degree	-.03	.11	-.01
M.F.A. Degree	.14	.09	.03
ART	-.11	.07	-.03
Minority	-.06	.06	-.01
Salary (Log)	-.02	.02	-.03
FR	-.08	.11	-.01
JOUR	-.06	.09	-.01
RE	-.08	.10	-.01
Years Employed	-.01	.02	-.01
GEOG	-.06	.10	-.01
MK	-.05	.10	-.01
PHIL	-.06	.10	-.01
EC	-.04	.07	-.01
Ph.D. Degree	.02	.04	.01
M.S. Degree	.03	.06	.01
J.D. Degree	.02	.10	.01
Constant	.63		

R^2=.82
SEE=.41
N=1372

The regression analysis for the total number of A grades assigned by undergraduate courses is presented in Table 2 with an R^2 of .50. The highlights of this table are:

* The larger the class size, the fewer the A's in the course.

* Freshman and sophomore courses give fewer A's on average.

* Part-time instructors give substantially more A's.

* Those courses with the higher number of A's, controlling for other factors, are curriculum and instruction; health, physical education, recreation and safety; psychology; special education; early childhood education; and mental health assistants.

* Fewer A's were given in these courses: geography; developmental studies; history; marketing; English; accounting; journalism; biology.

TABLE 2

Regressand: Total A Grades (Log)
By Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.51	.02	.63
DS	-1.35	.12	-.29
Freshman Course	-.24	.05	-.13
ECI	.68	.12	.12
HIST	-.51	.09	-.13
MK	-.61	.14	-.10
HPRS	.47	.12	.08
PSY	.29	.09	.07
SPE	.67	.15	.10
DEC	.68	.17	.08
ENG	-.32	.07	-.10
AC	-.41	.10	-.09
JOUR	-.46	.13	-.08
Full Prof	-.28	.11	-.11
BIO	-.25	.09	-.07
GEOG	-.39	.14	-.06
Single	.09	.04	.05
Part-Time Inst	.36	.11	.14
Instructor	.20	.10	.07
MH	.29	.13	.05
A&S Dean's Office	-.22	.08	-.08
BL	.19	.18	.03
Age	.23	.09	.07
IS	-.30	.13	-.05
Sophomore Course	-.10	.05	-.05
FED	.15	.13	.02
Ph.D. Degree	.07	.05	.05
M.F.A. Degree	.19	.12	.05
MATH	.09	.10	.02
FI	-.19	.16	-.03
VCD	-.27	.19	.03
G.T.A.	.08	.11	.02
GEOL	-.15	.13	-.02
RE	-.17	.14	-.03
ART	-.11	.10	-.03
DM	-.12	.09	-.03
CHEM	-.07	.11	-.01
BED	-.11	.13	-.02
UL	.20	.18	-.02
Dept Head	-.15	.12	-.04
Salary (Log)	.03	.02	.06
M.S. Degree	-.06	.08	-.02
Tenured	-.04	.08	-.03
Asst Prof	-.10	.09	-.06
Assoc Prof	-.09	.10	-.05
Junior Course	.02	.05	.01
M.B.A. Degree	-.06	.11	-.01
PHIL	-.07	.14	-.01
M.A. Degree	-.03	.07	-.01
Minority	.03	.08	.01
MGT	-.04	.10	-.01
EC	-.03	.10	-.01
J.D. Degree	.04	.16	.01
PHYS	.04	.14	.01
FR	.04	.14	.01
D.B.A. Degree	-.04	.15	-.01
Years Employed	.01	.03	.01
POLS	-.02	.12	-.01
MUS	-.01	.09	-.01
Female	-.01	.04	-.01
Constant	-.84		

R^2=.50
SEE=.56
N=1372

Regression analysis for the total number of B's by undergraduate courses is found in Table 3 and the R^2 equals .65. Table 3 may be summarized as follows:

* The larger the class size, the fewer B's assigned.

* Junior level courses had more B's controlling for other factors.

* The most number of B's were found in these courses: management; marketing; and journalism.

* The lowest relative proportion of B's were assigned in these courses: math; developmental studies; psychology†; early childhood education†; health, physical education, recreation, and safety†; decision mathematics; information systems; accounting; mental health assistants†; business education; biology; chemistry; geology; music; and special education.

* Freshman level courses had fewer B's than average.

† These courses were shown as giving proportionately more A's (Table 1).

TABLE 3
Regressand: Total B Grades (Log)
By Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.65	.02	.77
MGT	.23	.09	.05
Ed.D. Degree	-.16	.11	-.03
MATH	-.37	.09	-.08
DS	-.37	.10	-.08
Junior Course	.10	.05	.05
ENG	.05	.06	.01
MK	.25	.12	.04
PSY	-.28	.08	-.07
DEC	-.50	.15	-.06
Salary (Log)	-.01	.02	-.02
HPRS	-.38	.11	-.06
DM	-.25	.09	-.05
IS	-.30	.12	-.05
AC	-.23	.09	-.05
MH	-.28	.11	-.05
BED	-.38	.11	-.06
Assoc Prof	.13	.09	.09
BIO	-.22	.08	-.06
CHEM	-.23	.09	-.05
GEOL	-.28	.12	-.04
MUS	-.19	.08	-.04
M.S. Degree	.06	.07	.02
PHYS	-.21	.12	-.03
SPE	-.29	.14	-.04
ECI	-.17	.11	-.03
FR	-.25	.13	-.03
FED	.18	.12	.03
JOUR	.22	.11	.04
M.A. Degree	-.11	.06	-.04
Minority	.12	.07	.03
Single	.04	.03	.02
Dept Head	.01	.10	.01
Age (Log)	.09	.08	.03
M.F.A. Degree	-.06	.10	-.01
POLS	.08	.10	.01
G.T.A.	.15	.10	.05
Part-Time Inst	.12	.10	.05
D.B.A. Degree	-.15	.13	-.02
RE	.09	.12	.01
PHIL	-.08	.12	-.01
Female	.02	.03	.01
Full Prof	.14	.10	.05
Asst Prof	.11	.08	.06
Instructor	.10	.09	.03
UL	.12	.16	.01
HIST	-.03	.08	-.01
GEOG	-.05	.12	-.01
A&S Dean's Office	.03	.07	.01
ART	-.03	.09	-.01
BL	-.05	.13	-.01
Years Employed (Log)	.01	.02	.01
Senior Course	.02	.05	.01
Ph.D. Degree	-.02	.05	-.01
EC	.04	.09	.01
M.B.A. Degree	-.04	.09	-.01
FI	.05	.14	.01
Tenured	-.02	.07	-.01
VCD	.03	.17	.01
Freshman Course	.01	.15	.01
Constant	-.38		

R^2=.65
SEE=.49
N=1372

In Table 4 the regression analysis for the total number of C's by undergraduate courses is given. The R^2 for this analysis is .60. The major findings of Table 4 are:

* Senior and junior level courses have substantially fewer C's than average.

* The following courses had comparatively more C's: history; marketing; English; geography; journalism; philosophy; political science; geology; economics; developmental studies; decision mathematics; biology.

* Courses giving the lowest level of C grades are: curriculum and instruction; music; early childhood education; French; educational foundations; and health, physical education, recreation, and safety.

* Courses taught by department heads had more C's.

* Courses taught by single faculty members had fewer C's.

TABLE 4
Regressand: Total C Grades (Log)
By Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.57	.02	.59
ECI	-.56	.[illegible]	-.09
MUS	-.55	.09	-.11
Senior Course	-.26	.06	-.13
Single	-.26	.04	-.07
Junior Course	-.12	.05	-.06
HIST	.49	.09	.11
Ed.D. Degree	-.17	.12	-.03
MK	.48	.15	.07
DEC	-.58	.18	-.06
ENG	.31	.08	.09
GEOG	.47	.14	.06
FR	-.29	.15	-.03
FED	-.33	.14	-.04
JOUR	.34	.13	.05
HPRS	-.23	.13	-.03
MATH	-.13	.11	-.02
PSY	-.12	.09	-.03
Instructor	-.04	.11	-.01
BED	-.18	.14	-.03
SPE	-.26	.18	-.03
M.F.A. Degree	-.11	.12	-.02
MH	-.16	.13	-.02
M.B.A.	.25	.11	.05
PHIL	.35	.15	.04
POLS	.35	.12	.05
D.B.A. Degree	.18	.15	.02
M.S. Degree	.16	.07	.05
GEOL	.29	.14	.04
EC	.21	.10	.04
DS	.33	.12	.06
Assoc Prof	.28	.11	.13
Years Employed (Log)	-.05	.03	-.05
DM	.21	.10	.04
BIO	.20	.09	.04
FI	.26	.17	.03
BL	.26	.19	.03
AC	.16	.11	.03
MGT	.15	.11	.03
Part-Time Inst	-.08	.12	-.03
Minority	-.11	.09	-.03
Salary (Log)	-.05	.02	-.09
Dept Head	.32	.13	.07
Full Prof	.26	.12	.08
Asst Prof	.20	.10	.10
M.A. Degree	.10	.07	.03
PHYS	.17	.15	.02
Sophomore Course	.07	.06	.03
CHEM	.12	.11	.02
RE	.14	.15	.02
G.T.A.	.09	.12	.02
UL	.20	.20	.02
A&S Dean's Office	.07	.09	.02
IS	.12	.14	.02
ART	.07	.11	.02
Female	-.02	.04	-.01
Age (Log)	-.05	.10	-.01
Tenured	.03	.09	.02
J.D. Degree	.03	.17	.01
VCD	.02	.20	.01
Constant	.40		

R^2=.60
SEE=.60
N=1372

The regression analysis of the total number of D grades for undergraduate courses is found in Table 5. The R^2 equals .40. The key findings of Table 5 are:

* Freshman and sophomore courses had substantially more D grades.

* Those courses having relatively more D grades are: history; biology; decision mathematics; accounting; political science; math; and geography.

* Fewer D grades are found in these courses: developmental studies; English; curriculum and instruction; music; journalism; health, physical education, recreation and safety; and early childhood education.

* Courses taught by instructors holding D.B.A., M.S., or M.B.A. degrees had substantially more D's.

* Department heads assigned more D's than average.

TABLE 5
Regressand: Total D Grades (Log)
By Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.24	.02	.35
Freshman Course	.22	.04	.15
Sophomore Course	.25	.05	.15
HIST	.49	.08	.15
BIO	.34	.08	.11
DS	-.32	.10	-.08
DM	.33	.09	.09
AC	.33	.08	.09
ENG	-.17	.07	-.06
POLS	.36	.11	.08
MATH	.20	.09	.05
Ph.D. Degree	.07	.05	.05
M.B.A. Degree	.29	.10	.08
ECI	.27	.11	-.06
D.B.A. Degree	.29	.13	.05
MUS	-.21	.08	-.06
GEOG	.23	.12	.05
Minority	-.16	.08	-.06
Single	-.09	.03	-.06
M.A. Degree	.19	.06	.08
CHEM	.16	.10	.04
Senior Course	-.08	.04	-.06
JOUR	-.24	.12	-.05
M.S. Degree	.12	.05	.07
HPRS	-.20	.11	-.04
DEC	-.29	.15	-.04
Asst Prof	.18	.08	.13
Tenured	.11	.07	.08
MGT	-.13	.09	-.03
Salary (Log)	-.05	.02	-.11
Part-Time Instr	-.08	.10	-.04
Age (Log)	-.17	.08	-.06
MH	-.17	.12	-.03
Dept Head	.22	.07	.07
VCD	.20	.11	.03
FED	-.14	.12	-.03
EC	-.08	.09	-.02
GEOL	.12	.12	.02
ART	-.04	.09	-.01
SPE	-.10	.15	-.02
PHIL	.08	.13	.01
IS	.08	.12	.01
PHYS	-.07	.13	-.01
G.T.A.	-.01	-.01	.10
A&S Dean's Office	-.03	.08	-.01
M.F.A. Degree	-.05	.11	-.01
Full Prof	.13	.10	.06
Assoc Prof	.11	.09	.07
Instructor	.04	.10	.02
FR	.06	.13	.01
RE	.05	.13	.01
Female	.02	.04	.01
UL	.06	.17	.01
Ed.D. Degree	-.02	.11	-.01
J.D. Degree	.05	.15	.01
BL	-.04	.16	-.01
BED	-.02	.12	-.01
FI	-.03	.14	-.01
MK	.01	.12	.01
Constant	.57		

R^2=.40
SEE=.51
N=1372

Table 6 contains the regression analysis for undergraduate courses of the total number of F grades with an R^2 of .30. The table may be summarized as follows:

* Freshman and sophomore courses have more F's.

* The courses with the highest likelihood of an F grade being received are: history; math; accounting; English; decision mathematics; information systems; geography; chemistry; marketing; political science; biology; psychology; and real estate.

* Courses taught by instructors are less likely to have F grades assigned.

* Courses taught by full professors have comparatively more F's.

TABLE 6
Regressand: Total F Grades (Log)
By Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.09	.02	.18
Freshman Course	.23	.04	.19
HIST	.49	.07	.19
MATH	.54	.08	.18
AC	.45	.08	.16
ENG	.32	.06	.16
DM	.38	.08	.13
Full Prof	.16	.05	.09
IS	.40	.10	.10
GEOG	.38	.11	.09
G.T.A.	-.03	.08	-.01
CHEM	.26	.08	.08
MK	.27	.10	.07
POLS	.25	.09	.07
BIO	.15	.06	.06
Sophomore Course	.09	.04	.07
PSY	.17	.06	.06
A&S Dean's Office	-.13	.06	-.07
Years Employed (Log)	-.05	.02	-.09
DS	-.14	.09	-.05
Instructor	-.16	.06	-.08
RE	.20	.11	.05
MUS	-.11	.07	-.04
HPRS	.15	.09	.04
Ph.D. Degree	-.04	.04	-.04
M.F.A. Degree	-.10	.09	-.04
ECI	-.07	.09	-.02
Part-Time Inst	-.12	.09	-.07
GEOL	.09	.10	.02
Asst Prof	-.03	.04	-.03
BED	.07	.10	.02
M.B.A. Degree	-.03	.08	-.01
ART	.05	.08	.02
VCD	.09	.15	.01
Female	.02	.03	.02
MH	-.05	.10	-.01
Salary (Log)	-.01	.01	-.04
Minority	-.04	.06	-.02
Single	-.01	.03	-.01
JOUR	.05	.10	.01
Age (Log)	-.03	.07	-.01
MGT	.03	.08	.01
M.A. Degree	-.02	.05	-.01
Senior Course	-.01	.04	-.01
Ed.D. Degree	-.02	.08	-.01
BL	-.07	.14	-.02
J.D. Degree	.06	.13	.01
PHYS	-.03	.11	-.01
D.B.A. Degree	.03	.11	.01
FI	-.03	.12	-.01
DEC	-.02	.13	-.01
UL	.03	.14	.01
Dept Head	.01	.06	.01
FR	.02	.11	.01
PHIL	.01	.11	.01
FED	.01	.10	.01
Constant	.18		

R^2=.30
SEE=.44
N=1372

The total number of W grades by undergraduate courses was analyzed. The regression analysis may be found in Table 7 with an R^2 of .55. The highlights of Table 7 are:

* Freshman and sophomore courses have comparatively more W grades.

* The courses with the greatest relevance of W grades are: accounting; math; information systems; chemistry; finance; history; psychology; economics; decision mathematics; and French.

* The lowest relevant frequency of W grades are found in the following courses: early childhood education; geology; special education; geography; curriculum and instruction; music; developmental studies; and mental health assistants.

* Those courses taught by individuals whose highest degree was M.A. or Ph.D. have relatively more W's.

* Full Professors and Instructors were found to give relatively more W's.

TABLE 7
Regressand: Total W Grades (Log)
by Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.40	.02	.47
AC	.91	.10	.20
MATH	.70	.10	.15
Freshman Course	.29	.05	.16
IS	.84	.13	.13
CHEM	.43	.10	.08
Sophomore Course	.10	.05	.05
FI	.55	.15	.07
HIST	.20	.09	.05
PSY	.27	.09	.07
EC	.26	.10	.06
DM	.25	.10	.05
FR	.35	.14	.05
DEC	-.62	.17	-.07
GEOL	-.56	.13	-.08
SPE	-.50	.16	-.06
GEOG	-.50	.13	-.07
ECI	-.31	.13	-.05
MUS	-.20	.09	-.05
DS	-.29	.11	-.06
MS	-.02	.08	-.01
UL	-.25	.18	-.03
JOUR	-.29	.13	-.05
M.A. Degree	.23	.07	.07
MH	-.26	.13	-.04
PHYS	.20	.14	.03
PHIL	.21	.14	.03
Full Prof	.23	.11	.08
A&S Dean's Office	.11	.08	.04
J.D. Degree	.30	.16	.05
Ph.D. Degree	.14	.06	.09
Minority	.13	.08	.04
Senior Course	-.07	.05	-.04
HPRS	-.18	.12	-.03
BIO	-.11	.09	-.03
Ed.D. Degree	.17	.12	.04
Female	-.06	.04	-.03
D.B.A. Degree	.17	.15	.02
FED	.17	.13	.02
Part-Time Inst	.20	.11	.08
Instructor	.22	.10	.07
MK	.09	.13	.01
Years Employed (Log)	.03	.03	.03
Tenured	-.05	.08	-.03
RE	.09	.14	.01
BED	.06	.13	.01
MGT	-.06	.10	-.01
M.F.A. Degree	-.08	.12	-.02
Asst Prof	.15	.09	.09
Assoc Prof	.16	.10	.08
Dept Head	.18	.12	.05
G.T.A.	.11	.11	.03
Salary (Log)	-.01	.02	-.02
ENG	-.03	.07	-.01
Age (Log)	-.03	.09	-.01
ART	.03	.10	.01
VCD	-.04	.19	-.01
BL	-.03	.18	-.01
M.B.A. Degree	.02	.11	.01
Constant	-.28		

R^2=.55
SEE=.55
N=1372

The regression analysis for the total number of I grades by undergraduate courses may be found in Table 8. The R^2 was .39. The major findings of Table 8 are:

* Developmental studies had over 150% more I grades assigned compared with other courses, controlling for the size of the class and other relevant factors.

* Senior courses had relatively more I's assigned.

* Those courses with the greatest comparative level of I's are: political science; urban life; and vocational and career development.

* The lowest number of relative I grades are found in these courses: English; accounting; biology; music; chemistry; geography; French; and math.

TABLE 8
Regressand: Total I Grades (Log)
by Undergraduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
DS	1.56	.08	.54
Class Size (Log)	.11	.01	.22
POLS	.27	.08	.08
UL	.52	.12	.10
Freshman Course	-.02	.03	-.02
ENG	-.20	.05	-.10
VCD	.28	.13	.05
AC	-.20	.07	-.07
Senior Course	.07	.03	.07
BIO	-.13	.06	-.05
MUS	-.12	.06	-.05
CHEM	-.18	.07	-.06
GEOG	-.23	.09	-.06
HPRS	-.14	.08	-.04
FR	-.19	.10	-.04
MATH	-.16	.07	-.06
MGT	-.12	.07	-.04
Minority	-.15	.06	-.07
Salary (Log)	-.03	.01	-.11
SPE	-.16	.10	-.04
FI	-.17	.11	-.04
BL	-.09	.10	-.02
M.B.A. Degree	.11	.07	.04
Tenured	.06	.06	.06
M.A. Degree	.07	.04	.04
FED	.10	.09	.03
MK	.10	.09	.02
MH	.04	.09	.01
DM	-.05	.07	-.02
HIST	-.07	.06	-.03
Ph.D. Degree	.04	.03	.04
Instructor	.01	.06	.01
Assoc Prof	-.03	.04	-.03
A&S Dean's Office	.08	.06	.05
Part-Time Inst	-.13	.07	-.08
G.T.A.	-.07	.07	-.04
RE	-.08	.10	-.02
Sophomore Course	.02	.04	.01
Single	-.02	.03	-.02
Female	.02	.03	.02
DEC	-.08	.12	-.02
Years Employed (Log)	-.01	.02	-.02
ART	.02	.07	.01
IS	-.05	.09	-.01
PSY	-.03	.06	-.01
BED	.04	.09	.01
GEOL	-.03	.09	-.01
Age (Log)	-.02	.06	-.01
Asst Prof	-.01	.05	-.01
ECI	.02	.08	.01
Dept Head	.01	.06	.01
D.B.A. Degree	-.02	.10	-.01
M.F.A. Degree	.02	.08	.01
JOUR	-.02	.09	-.02
EC	-.01	.07	-.01
Constant	.31		

R^2=.39
SEE=.39
N=1372

Graduate Grades

In Tables 9 through 16 the regression analysis for grades given in graduate courses is presented. The first analysis is based upon total weighted grades using the four point system for all grades taught Fall Quarter, 1975, which is shown in Table 9. The R^2 was calculated to be .78. Table 9 may be summarized as follows:

* Courses taught by department heads have comparatively lower total weighted grades.
* Class size appears to have a direct proportionate relationship to total weighted grades.
* The following courses had relatively higher total grades: curriculum and instruction; counseling and psychological services; and special education.
* The courses with the lower level of total-weighted grades were found to be: geography; psychology; and urban life.

TABLE 9
Regressand: Total Weighted Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.96	.03	.81
Dept Head	-.43	.10	-.09
Ph.D. Degree	.01	.10	.01
GEOG	-.87	.25	-.07
PSY	-.34	.13	-.06
UL	-.42	.16	-.05
ECI	.25	.11	.06
CPS	.27	.12	.05
SPE	.24	.12	.05
FED	.12	.11	.03
MUS	-.21	.14	-.03
BIO	-.25	.16	-.03
Years Employed (Log)	-.05	.05	-.03
HIST	-.20	.18	-.02
ART	.23	.21	.03
Minority	.11	.13	.03
MGT	.20	.14	.03
MATH	-.19	.17	-.02
GEOL	-.56	.45	-.02
FI	-.11	.20	-.01
M.S. Degree	.19	.17	.02
AC	-.14	.18	-.02
Assoc Prof	.11	.07	.04
Asst Prof	.15	.10	.05
Part-Time Inst	.25	.20	.03
Single	.06	.06	.02
RE	.24	.29	.02
BED	.16	.25	.01
FR	.26	.36	.01
MK	-.12	.23	-.01
Ed.D. Degree	.06	.12	.02
POLS	-.07	.18	-.01
IS	-.08	.21	-.01
Salary (Log)	-.01	.02	-.02
Age (Log)	.09	.16	.01
HPRS	.11	.21	.01
BA	.06	.12	.01
ENG	.05	.15	.01
BL	.12	.33	.01
M.B.A. Degree	.11	.34	.01
CHEM	-.05	.20	-.01
Instructor	.06	.20	.01
G.T.A.	.06	.20	.01
Tenured	.03	.10	.01
PHYS	-.05	.25	-.01
PHIL	-.04	.26	-.01
M.F.A. Degree	-.07	.26	-.01
M.A. Degree	-.05	.21	-.01
EC	.03	.18	.01
DEC	.02	.16	.01
EAS	.02	.13	.01
D.B.A. Degree	-.02	.18	-.01
Constant	.82		

R^2=.78
SEE=.62
N=778

The regression analysis for total A grades by graduate courses may be found in Table 10 with R^2 of .69. The key findings of this analysis are:

* The larger the class size the smaller the relative proportion of A's.

* The courses with the higher comparative frequency of A grades are curriculum and instruction; counseling and psychological services; special education; foundations of education; and management.

* Those courses with comparatively lower amounts of A grades are accounting; history; urban life; and geography.

* One personal characteristic of faculty members appears to have a significant relation with A grades--that being age. It indicates that the older faculty members tend to give higher grades.

TABLE 10
Regressand: Total A Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.63	.02	.73
AC	-.59	.16	-.09
Ph.D. Degree	.01	.08	.01
HIST	-.55	.15	-.06
UL	-.44	.14	-.07
FI	-.32	.17	-.05
ECI	.39	.09	.12
CPS	.35	.10	.10
SPE	.40	.10	.10
Years Employed (Log)	-.07	.04	-.06
ART	.22	.17	.04
FED	.20	.10	.06
MGT	.30	.12	.06
Dept Head	-.10	.08	-.03
Age (Log)	.32	.14	.07
GEOG	-.43	.21	.04
MATH	-.27	.15	-.04
PHYS	-.37	.21	-.04
EC	-.21	.15	-.03
MK	-.25	.20	-.03
DEC	.21	.14	.04
POLS	-.14	.15	-.02
M.S. Degree	.23	.14	.04
BIO	-.13	.13	-.02
Part-Time Inst	.28	.18	.04
D.B.A. Degree	-.17	.15	-.03
Single	.06	.06	.03
BA	.15	.10	.04
EAS	.10	.11	.02
Asst Prof	.11	.09	.05
VCD	.12	.15	.02
BED	.16	.22	.02
PSY	.09	.11	.02
Assoc Prof	.08	.06	.04
Salary (Log)	-.01	.02	-.02
PHIL	-.16	.23	-.01
GEOL	-.25	.38	-.01
FR	.16	.31	.01
RE	.13	.25	.01
M.B.A. Degree	-.12	.28	-.01
Instructor	.10	.18	.02
G.T.A.	.10	.17	.01
HPRS	-.09	.18	-.01
M.F.A. Degree	.09	.21	.01
Ed.D. Degree	.04	.10	.02
CHEM	-.07	.17	-.01
Minority	.03	.11	.01
J.D. Degree	-.09	.30	-.01
BL	.08	.36	.01
Tenured	-.01	.09	-.01
MUS	.01	.07	.01
Constant	-.82		

R^2=.69
SEE=.53
N=778

In Table 11 the regression analysis for the total B grades by graduate courses is given. The R^2 equals .60. The key findings of Table 11 are:

* Courses taught by department heads have relatively fewer B grades.

* No course type had comparatively more B grades.

* These courses had a lower likelihood of B grades: psychology; art; vocational and career development; curriculum and instruction; special education; and educational administration and supervision.

* Older faculty gave proportionately fewer B's.

TABLE 11
Regressand: Total B Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.63	.03	.69
Dept Head	-.57	.10	-.16
PSY	-.82	.13	-.18
Years Employed (Log)	.08	.05	.06
Ed.D. Degree	-.13	.11	-.05
EC	.27	.18	.04
ART	-.44	.22	-.08
Asst Prof	.06	.10	.03
VCD	-.42	.17	-.06
ECI	-.32	.11	-.09
PHYS	.33	.26	.03
Ph.D. Degree	-.17	.09	-.08
SPE	-.33	.12	-.08
EAS	-.32	.13	-.07
Age (Log)	-.43	.16	-.08
BL	.56	.34	.04
IS	-.38	.21	-.05
DEC	-.31	.16	-.05
CPS	-.17	.11	-.04
MUS	-.27	.14	-.05
PHIL	-.34	.27	-.03
GEOG	-.31	.26	-.03
BIO	-.19	.16	-.03
FED	-.14	.11	-.04
Minority	.10	.11	.03
Tenured	.13	.10	.07
Assoc Prof	-.10	.07	-.05
M.A. Degree	-.22	.21	-.03
UL	-.14	.16	-.02
D.B.A. Degree	-.21	.18	-.04
FI	.18	.20	.02
MK	.21	.24	.02
HIST	.17	.18	.02
RE	.22	.30	.02
G.T.A.	-.22	.21	-.03
CHEM	-.11	.21	-.01
Part-Time Inst	-.23	.23	-.03
Instructor	-.20	.21	-.03
Single	-.07	.07	-.03
Female	.05	.08	.02
BA	-.04	.12	-.01
M.B.A. Degree	.20	.35	.01
GEOL	.19	.46	.01
HPRS	.09	.22	.01
POLS	.06	.18	.01
ENG	.05	.15	.01
MATH	.05	.17	.01
AC	.04	.18	.01
A&S Dean's Office	.04	.26	.01
M.S. Degree	.03	.17	.01
M.F.A. Degree	.04	.27	.01
Constant	1.57		

R^2=.60
SEE=.64
N=778

The total number of C grades by graduate courses were analyzed using regression analysis. This analysis may be found in Table 12 with an R^2 of .34. The important findings of the table may be summarized as follows:

* The courses with the higher relative proportion of C grades are: accounting; finance; and philosophy.

* These courses had relatively fewer C grades: counseling and psychological services; curriculum and instruction; English; educational administration and supervision; vocational and career development; and psychology.

* Age of the teachers was negatively associated with the number of C grades given.

TABLE 12
Regressand: Total C Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.20	.02	.39
AC	.90	.14	.24
FI	.60	.15	.15
CPS	-.29	.09	-.13
ECI	-.24	.08	-.13
M.B.A. Degree	.49	.25	.07
MATH	.23	.13	.06
PHIL	.42	.19	.07
ENG	-.23	.11	-.07
EAS	-.21	.10	-.08
VCD	-.26	.13	-.07
PSY	-.20	.10	-.08
MGT	-.21	.11	-.07
Age (Log)	-.27	.12	-.10
POLS	-.17	.13	-.04
DEC	-.16	.12	-.05
Female	.09	.06	.06
BA	.07	.09	.03
RE	-.31	.22	-.05
EC	.10	.13	.03
IS	.13	.16	.03
MK	.12	.17	.02
CHEM	.16	.15	.03
M.A. Degree	.11	.15	.03
Part-Time Inst	-.27	.15	-.06
Asst Prof	-.14	.06	-.11
Assoc Prof	-.11	.05	-.09
Dept Head	-.12	.07	-.06
Minority	-.08	.09	-.04
Single	-.05	.05	-.04
MUS	-.11	.10	-.04
SPE	-.06	.09	-.03
J.D. Degree	.24	.26	.04
BL	-.30	.30	-.04
HPRS	.08	.16	.02
Instructor	-.13	.15	-.04
G.T.A.	-.11	.15	-.03
GEOG	.07	.18	.01
Years Employed	-.01	.03	-.01
BED	-.08	.19	-.01
PHYS	-.07	.18	-.01
M.S. Degree	-.08	.13	-.02
BIO	.03	.12	.01
FR	-.09	.27	-.01
HIST	-.04	.13	-.01
D.B.A. Degree	-.07	.13	-.02
ART	-.03	.16	-.01
Ph.D. Degree	-.05	.07	-.04
Ed.D. Degree	-.05	.09	-.03
UL	-.03	.12	-.01
Salary (Log)	.01	.02	.02
M.F.A. Degree	-.04	.19	-.01
FED	-.01	.09	-.01
Constant	1.04		

R^2=.34
SEE=.46
N=778

The analysis of the total number of D grades for all graduate courses showed a weak R^2 which was .21. The analysis may be found in Table 13 and yielded these findings.

* Accounting courses have proportionately more D grades.
* Courses taught by teachers whose highest degree is M.B.A. gave relatively more D grades.
* Counseling and psychological services and educational foundations gave proportionately fewer D grades.

TABLE 13
Regressand: Total D Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
AC	.38	.06	.26
M.B.A. Degree	.64	.10	.22
Class Size (Log)	.02	.01	.15
IS	.07	.07	.04
EC	.05	.05	.03
Tenured	-.04	.03	-.08
Ph.D. Degree	.03	.03	.07
SPE	-.01	.04	-.01
HPRS	.05	.07	.03
MK	.04	.07	.02
GEOG	.07	.08	.03
MUS	-.01	.04	-.01
M.S. Degree	-.08	.05	-.06
CHEM	.03	.06	.02
BED	.02	.08	.01
FI	.02	.06	.02
D.B.A. Degree	-.06	.06	-.05
G.T.A.	.05	.06	.03
CPS	-.10	.04	-.11
Assoc Prof	-.03	.02	-.07
UL	-.02	.05	-.02
J.D. Degree	-.07	.11	-.03
Salary (Log)	.01	.01	.01
Asst Prof	-.03	.03	-.07
Part-Time Inst	-.04	.07	-.03
DEC	-.10	.05	-.08
ECI	-.08	.04	-.11
POLS	-.09	.05	-.06
FED	-.08	.04	-.10
VCD	-.09	.05	-.07
MGT	-.09	.05	-.08
Years Employed (Log)	-.01	.02	-.05
BA	-.07	.04	-.07
PSY	-.06	.04	-.07
ENG	-.07	.05	-.06
HIST	-.07	.05	-.05
EAS	-.05	.04	-.06
MATH	-.06	.05	-.04
M.A. Degree	-.04	.06	-.03
BIO	-.04	.05	-.03
PHIL	-.06	.08	-.06
RE	-.07	.09	-.03
PHYS	-.04	.08	-.02
FR	-.07	.11	-.02
M.F.A. Degree	-.04	.08	-.03
A&S Dean's Office	-.04	.08	-.02
BL	-.05	.13	-.02
Minority	-.02	.04	-.02
Ed.D. Degree	.01	.04	.02
Single	-.01	.02	-.02
Female	.01	.02	.01
ART	.01	.07	.01
Dept Head	-.01	.03	-.01
Instructor	-.01	.06	-.01
GEOL	-.02	.14	-.01
Age (Log)	-.01	.05	-.01
Constant	.07		

R^2=.21
SEE=.19
N=778

As with the analysis of D grades, the regression analysis based upon the total F grades by graduate courses yielded a weak R^2 totalling .21. The analysis is given in Table 14. The table may be summarized as follows:

* The graduate courses with the higher relative proportion of F grades are accounting; math; and information systems.

* The courses with the lower proportion of F grades are curriculum and instruction; and management.

* The categories of teachers giving fewer F grades were department heads, assistant and associate professors, and instructors.

* Those teachers whose higher degree was M.B.A. gave comparatively more F grades.

TABLE 14
Regressand: Total F Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
AC	.26	.04	.22
M.B.A. Degree	.41	.08	.17
MATH	.18	.04	.15
IS	.20	.05	.14
Class Size (Log)	.02	.01	.11
ENG	.06	.04	.06
Age (Log)	-.14	.04	-.16
RE	.11	.07	.05
Female	.04	.02	.08
Years Employed (Log)	.01	.01	.06
ECI	-.04	.02	-.07
BED	.08	.06	.04
Dept Head	-.07	.02	-.11
Asst Prof	-.09	.03	-.23
Assoc Prof	-.04	.02	-.11
Salary (Log)	.01	.01	.09
Instructor	-.10	.05	-.09
G.T.A.	-.08	.05	-.06
Tenured	-.04	.03	-.10
MGT	-.07	.03	-.07
D.B.A. Degree	.05	.04	.05
Single	-.02	.02	-.05
HIST	.02	.04	.02
EC	-.05	.04	-.04
DEC	.02	.04	.01
EAS	-.03	.03	-.04
MK	-.05	.06	-.03
HPRS	-.04	.05	-.02
A&S Dean's Office	-.03	.06	-.02
PSY	-.03	.03	-.03
CPS	-.02	.03	-.03
BA	-.02	.03	-.03
POLS	-.03	.04	-.02
BIO	-.02	.04	-.02
Minority	-.01	.03	-.02
SPE	-.01	.03	-.02
FR	-.03	.09	-.01
M.S. Degree	-.02	.04	-.01
M.A. Degree	-.02	.05	-.02
GEOG	-.02	.06	-.01
MUS	-.01	.03	-.01
PHYS	-.02	.06	-.01
M.F.A. Degree	-.03	.06	-.02
ART	.02	.05	.02
FI	-.01	.05	-.01
Part-Time Inst	-.01	.05	-.01
GEOL	.02	.11	.01
UL	-.01	.04	-.01
VCD	-.01	.04	-.01
PHIL	-.01	.06	-.01
Constant	.50		

R^2=.21
SEE=.15
N=778

The total number of W grades by graduate courses was analyzed using regression analysis. The R^2 was .47 and is presented in Table 15. A summary of the table follows.

* The courses with the higher relative proportion of W grades are: accounting, information systems; and finance.

* The courses with the lower proportion of W grades are: curriculum and instruction; vocational and career development; psychology; counseling and psychological services; special education; early childhood education; educational administration and supervision; and educational foundations.

* As the age of teachers increased, the proportion of W's dropped.

* The higher salaried teachers had proportionately fewer W grades.

* Department heads had proportionately fewer W grades.

* Single teachers had relatively fewer W grades.

TABLE 15
Regressand: Total W Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.30	.02	.51
AC	.90	.14	.20
IS	.79	.16	.15
FI	.52	.15	.11
Ed.D. Degree	-.11	.09	-.07
ECI	-.32	.08	-.15
MATH	.19	.13	.04
BA	.07	.09	.03
EC	.19	.13	.04
MK	.34	.18	.05
Age (Log)	-.51	.12	-.16
VCD	-.31	.13	-.07
Salary (Log)	.04	.02	.13
MUS	.12	.10	.04
HIST	.16	.13	.03
CHEM	.20	.16	.04
BED	.20	.19	.03
GEOL	.57	.34	.05
D.B.A. Degree	-.27	.14	-.07
Dept Head	-.14	.07	-.06
PSY	-.27	.09	-.09
Single	-.11	.05	-.08
CPS	-.25	.08	-.10
SPE	-.28	.09	-.11
DEC	-.33	.12	-.08
EAS	-.27	.10	-.09
Tenured	.05	.08	.04
Ph.D. Degree	-.09	.07	-.07
ART	-.21	.16	-.06
Minority	.16	.10	.07
FED	-.18	.08	-.07
PHYS	-.35	.19	-.05
MGT	-.19	.11	-.06
Female	.09	.06	.05
HPRS	-.19	.16	-.03
FR	-.32	.28	-.03
POLS	-.13	.13	-.03
Instructor	-.16	.15	-.04
Part-Time Inst	-.19	.16	-.04
M.S. Degree	.11	.13	.03
BL	.34	.32	.04
J.D. Degree	-.21	.27	-.03
Assoc Prof	-.03	.05	-.02
Asst Prof	-.06	.07	-.05
M.B.A. Degree	.16	.26	.02
BIO	-.07	.12	-.02
A&S Dean's Office	.11	.19	.02
Years Employed	.02	.04	.02
RE	-.04	.23	-.01
PHIL	-.03	.20	-.01
M.A. Degree	.03	.16	.01
M.F.A. Degree	.03	.20	.01
Constant	1.55		

R^2=.47
SEE=.48
N=778

In Table 16 the regression analysis of total I grades for graduate courses is given. The R^2 was found to be relatively weak, equalling .19. The main findings of the table are:

* Courses taught by department heads have proportionately more I grades.

* The types of courses with the highest proportion of I grades are: political science; urban life; and marketing.

* The courses with the lowest relative proportion of I grades are: special education and English.

* Courses taught by teachers with the J.D. degree as their highest degree had relatively more I's.

TABLE 16
Regressand: Total I Grades (Log)
by Graduate Courses

Regressors	Regressor Estimators	Standard Error of Estimators	β
Class Size (Log)	.13	.02	.25
Dept Head	.36	.07	.19
POLS	.39	.14	.10
UL	.34	.12	.10
MK	.37	.18	.07
EAS	.14	.10	.06
J.D. Degree	.65	.28	.11
MGT	.12	.11	.04
VCD	.10	.13	.03
DEC	.12	.12	.04
M.B.A. Degree	-.43	.27	-.06
SPE	-.20	.09	-.09
ENG	-.24	.11	-.07
PSY	-.19	.10	-.08
Age (Log)	.11	.13	.04
Part-Time Inst	.20	.17	.05
EC	.08	.14	.02
BL	-.45	.33	-.06
M.S. Degree	-.17	.14	-.05
Instructor	.15	.16	.04
BIO	-.16	.12	-.05
PHYS	-.26	.20	-.05
HPRS	-.21	.17	-.04
G.T.A.	-.13	.16	-.03
M.A. Degree	-.27	.17	-.07
HIST	-.18	.14	-.05
FR	-.32	.29	-.03
BED	-.19	.20	-.03
ECI	-.09	.08	-.05
AC	-.19	.14	-.05
MATH	-.15	.13	-.04
D.B.A. Degree	.08	.14	.03
IS	-.15	.16	-.03
BA	-.09	.09	-.04
CHEM	-.08	.16	-.02
Minority	-.02	.10	-.01
Female	-.04	.06	-.03
CPS	-.04	.08	-.02
M.F.A. Degree	-.24	.21	-.06
ART	.14	.17	.05
GEOL	-.16	.36	-.02
GEOG	-.08	.20	-.01
Years Employed (Log)	.02	.03	.03
Asst Prof	.02	.06	.01
RE	.06	.23	.01
PHIL	.06	.21	.01
Ph.D. Degree	-.03	.08	-.03
Salary (Log)	.01	.02	.03
Assoc Prof	-.01	.05	-.01
MUS	-.02	.11	-.01
Single	.01	.06	.01
Ed.D. Degree	-.01	.09	-.01
FI	-.02	.16	-.01
A&S Dean's Office	.02	.20	.01
Constant	-.42		

R^2=.19
SEE=.49
N=778

CONCLUSIONS AND IMPLICATIONS

A study has been conducted on grading patterns of faculty at Georgia State University. It examined the characteristics of teachers in relation to grades in the more than two thousand courses for Fall Quarter, 1975. The technique of multiple regression was employed and took into account the large number of faculty variables investigated. Separate analyses were performed by graduate and undergraduate levels and then by letter grades.

The conclusions reached from this study concerning undergraduate courses are:

1. Part-time teachers, GTA's and instructors tended to give higher grades on average than other members of the faculty.

2. Courses showing a tendency to have proportionately higher grades at the undergraduate level include: special education; curriculum and instruction; health, physical education, recreation and safety; and early childhood.

3. Courses showing a tendency to have proportionately lower grades at the undergraduate level include: developmental studies; accounting; music; vocational and career development; information systems; chemistry; and decision mathematics.

4. Courses which had a higher grading pattern also indicated fewer withdrawals.

5. There appears to be a progression to more stringent grades as the faculty member's rank increases. Correspondingly, department head status is indicative of the most stringent grading pattern.

6. As the size of the course increased, a lower relative grading pattern emerged.

7. Freshman and sophomore courses had a higher likelihood of lower grades and increased withdrawals.

8. Incomplete grades were more likely to be found in senior level courses and also in developmental studies level courses.

The conclusions reached from this study concerning graduate courses are:

1. Courses showing a tendency to have proportionately higher grades at the graduate level include: curriculum and instruction; counseling and psychological services; and special education.

2. Courses showing a tendency to have proportionately lower grades at the graduate level include: psychology; urban life; and accounting.

3. As faculty rank increased for courses at the graduate level, a more stringent grading pattern did not appear (which was noted at the undergraduate level). In fact, a slight reversal was shown. However, department head status remained as an indication of a stringent grading pattern.

4. There is a negative relationship between years at the institution and grades; however, there is a positive relationship between age and grades.

Several implications are drawn from this research effort by the authors. Concerning undergraduate courses, the fact that part-time faculty, GTA's and instructors show a pattern of giving higher grades may indicate a relationship between job status of individual groups of faculty members and grades given. Put another way, faculty having the lowest power base may feel that they are vulnerable in this era of student complaints and litigations.

The findings of this study can be interpreted to support the implication that grading standards vary widely between schools and also between departments within schools. If one can assume that the frequency of high grades is indicative of "easy" grading, then it can be said that numerous courses in the School of Education reflect this pattern in grading. By the same comparison, numerous courses at the undergraduate level in the School of Business Administration and at the graduate and

undergraduate levels in the School of Arts and Sciences reveal a pattern of "strict" grading.

There is an implication that subject content has a bearing on grading patterns. In courses that are criterion referenced, e.g., mathematics, sciences, accounting, information systems, etc., a body of knowledge must be mastered by students to progress to subsequent courses. Hence, subjects which lend themselves to this type of structured curriculum may give the instructors better clues about student performances. These are some of the courses at this institution in which students appear less likely to make high grades and which have high withdrawal rates at the undergraduate level.

Courses observed as having comparatively higher grading patterns are part of recently established curricula and programs at this institution. In light of this study, we hypothesize that students have many more options to avoid high risk courses at this university than was the case ten years ago and that this is one of the principal reasons for the redistribution of grades. The next study will test this hypothesis by taking into account student ability levels and programs of study in relation to grades.

REFERENCES

Bolin, J.G. Honors inflation. In D.W. Vermilye (Ed.), Learner-centered reform, San Francisco, Ca: Jossey-Bass, 1975.

Carnegie Commission. Priorities for action: Final report of the Carnegie Commission on Higher Education. New York: McGraw Hill, 1973.

Etzioni, A. Grade inflation. Science, 1975, 190, 101.

Feldmesser, R.A. The positive functions of grades. Educational Record, 1972, 53, 66-72.

Goldman, R.D. & Hewitt, B.N. Adaptation-level as an explanation for differential standards in college grading. Journal of Educational Measurement, 1975, 12, 149-161.

Goldman, R.D., Schmidt, D.E., Hewitt, B.N., & Fisher, R. Grading practices in different major fields. American Educational Research Journal, 1974, 11, 343-357.

Hills, J.R. On the use of student ratings of faculty in determination of pay, promotion and tenure. Research in Higher Education, 1974, 2, 317-324.

McDonald, T.F. An investigation of the effects of a rapid transition from "open-door" to "selective" admissions. (Doctoral dissertation, Michigan State University, 1966). Dissertation Abstracts, 1967, 27, 4084. (University Microfilms No. 67-7579).

Safarik, J.G. 1972-73 Grade distributions and analyses at California State University, Chico, California: Office of Institutional Research, January, 1974.

Tufte, E.R. Data analysis for politics and policy. Englewood Cliffs, New Jersey: Prentice-Hall, 1974.

Williams, J.M. Relationship of certain characteristics and perceptions of full-time Jefferson State Junior College instructors with grading practices. (Doctoral dissertation, University of Alabama, 1971). Dissertation Abstracts International, 1971, 32, 2388A-2389A. (University Microfilms No. 71-29232).

Zigli, R.M. Georgia State University grade analysis, Atlanta, Ga: Office of Institutional Planning, June, 1972.

Appendix A

	Undergraduate Courses		Graduate Courses	
		%		%
A	6777	23.3	5402	49.2
B	8655	29.7	3395	30.9
C	6462	22.2	497	4.5
D	1449	5.0	61	0.6
F	771	2.6	43	0.4
WF	9[illegible]	0.3	12	0.1
W	3820	13.1	854	7.8
I	694	2.4	507	4.6
S	339	1.2	195	1.8
U	8	<.1	5	<.1
AU	48	0.2	2	<.1
TOTAL	29114		10973	